| | Application No. | Applicant(s) | |
|--|--|--|---------------------------|
| Notice of Allowability | Application No. | | |
| | 10/789,662 Examiner | BLUEM, HANS PETER Art Unit | |
| | | | |
| | Minh D. A | 2821 | |
| The MAILING DATE of this communication ap All claims being allowable, PROSECUTION ON THE MERITS I herewith (or previously mailed), a Notice of Allowance (PTOL-8 NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT of the Office or upon petition by the applicant. See 37 CFR 1.3 | S (OR REMAINS) CLOSED in this apple to or other appropriate communication RIGHTS. This application is subject to | plication. If not include will be mailed in due | ed course. THIS |
| 1. \square This communication is responsive to $2/14/06$. | | | |
| 2. The allowed claim(s) is/are <u>1-19</u> . | | | |
| 3. | | | |
| Attachment(s) 1. ☑ Notice of References Cited (PTO-892) 2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948) 3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SE Paper No./Mail Date | Paper No./Mail Dat 3/08), 7. ☐ Examiner's Amendr | (PTO-413), le nent/Comment | |
| TUYET VO PRIMARY EXAMINER | | | |

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Allowable Subject Matter

1. Claims 1-19 are allowed.

The following is an examiner's statement of reasons for allowance:

Prior art does not teach that, a cavity surrounding the cathode and operable to resonate when electromagnetic radiation of the particular frequency is introduced into the cavity; and an energy input coupled to the cavity and operable to introduce electromagnetic radiation of the particular frequency into the cavity along the longitudinal axis of the cathode in combination with all limitations recited in independent claim 1.

Prior art does not teach that, a coaxial line coupled to the cavity having a center conductor operable to produce an electron beam along a longitudinal axis of the coaxial cable when driven by resonant electromagnetic radiation of the particular frequency, wherein the coaxial line is operable to introduce electromagnetic radiation of the particular frequency into the cavity along the longitudinal axis of the coaxial cable in combination with all limitations recited in independent claim 9.

Prior art does not teach that, providing a cavity operable to resonate when electromagnetic radiation of a particular frequency is introduced into the cavity; providing a cathode within the cavity operable to generate an electron beam on a longitudinal axis when being driven by resonant electromagnetic radiation of the particular frequency; and introducing electromagnetic radiation of the particular frequency into the cavity along the longitudinal axis of the cathode recited in independent claim 15.

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The remaining dependent claims 2-8 and 10-14 are allowable for at least above reason.

Prior art made of record and not relied upon is considered pertinent to applicant's disclosure. None of record prior arts stands alone or combination with the others discloses all limitations required in claim invention.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Citation of relevant prior art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Prior art Whitham et al. (U.S. Patent No. 7,005,809) discloses an energy switch for particle accelerators.

Prior art Yao et a.I (U.S. Patent No. 6,856,105) discloses a multi-energy particle accelerator.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh Dieu A whose telephone number is (571) 272-1817. The examiner can normally be reached on M-F (5:30 AM-2:45 PM).

If attempts to reach the examiner by telephone are unsuccessful, the

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examiner's supervisor, Timothy Callahan can be reached on (571) 272-1740. The fax phone number for the organization where this application or proceeding is

assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TUYET VO PRIMARY EXAMINER

Examiner

Minh A

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4/26/06